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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/826,606

04/16/2004

Mark Edward Viste

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1193

7590

11/12/2004

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EXAMINER

TRAN, LONG K

ART UNIT

PAPER NUMBER

2818

DATE MAILED: 11/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/826,606	Applicant(s) VISTE ET AL.	
	Examiner Long K. Tran	Art Unit 2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 42 - 60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 42 - 60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>07/09/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This office action is in response to Amendment filed on April 16, 2004.
2. Claims **1 – 41** and **61 – 64** have been cancelled.
3. Claims **42 – 60** are presented for examination.

Information Disclosure Statement

4. This office acknowledges of the following items from the Applicant:
Information Disclosure Statement (IDS) filed on July 09, 2004.
The references cited on the PTO -1449 form have been considered.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims **42 – 44** and **52 – 60** are rejected under 35 U.S.C. 102(b) as being anticipated by Shah et al. (US. Patent No. 6,219,222).

Regarding claims **42** and **60**, Shah et al. disclose a method of making an electrolytic capacitor or an electrolyte for activating comprising a tantalum anode (column 1, lines 24 – 27), cathode (column 1, line 59); activating the anode and the cathode (column 1, lines 27 – 29) with electrolyte comprising:

- about 35-60%, by weight water (column 9, line 55, which is within the claimed range);

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- about 10-55%, by weight organic solvent (column 9, line 56, which is within the claimed range);
- about 0.05 to 30%, by weight, at least one phosphorus oxy acid/phosphoric acid (column 9, line 57, which is within the claimed range);
- wherein the electrolyte has a pH is 1 – 7 (which is within the claimed range) and a freezing point below about -30°C (column 2, lines 11 – 12 and 26 – 29).

Regarding claims **43 and 44**, Shah et al. disclose at least one acid comprises sulphuric acid and at least one acid selected from boric acid and phosphorus oxy acid (column 9, lines 6-9).

Regarding claims **52 and 53**, it is inherent that the phosphoric acid of Shah et al. being a phosphorus oxy acid or orthophosphoric acid.

Regarding claims **54 and 55**, Shah et al. disclose the cathode is a conductive metal provided with a semiconductive or metal-like conductive coating or at least one element chosen from a group consisting of an oxide, a nitride, carbide or a metal or an activated carbon (column 9, line 25).

Regarding claim **56**, Shah et al. disclose the cathode comprises a metal selected from a group consisting of ruthenium (column 9, line 25).

Regarding claim **57**, Shah et al. disclose the acid comprises sulphuric acid (column 1, lines 44 – 55 and column 2, lines 5 – 17).

Regarding claim **58**, Shah et al. disclose the cathode comprises a porous ruthenium oxide film provided on a tantalum substrate or a titanium substrate or an alloy thereof (column 3, lines 15 –17).

Regarding claim **59**, Shah et al. disclose the electrolyte has a pH is 1 – 7 (column 2, lines 11 – 12).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim **45** is rejected under 35 U.S.C. 103(a) as being unpatentable over Shah et al. (US 6,219,222).

Regarding claim **45**, Shah et al. disclose all the claimed limitations with respect to the claims 42 – 44 above, except for the electrolytic solution comprises:

- about 0.05 to 10%, by weight, sulphuric acid;
- about 0.05 to 10%, by weight, boric acid; and
- about 0.05 to 10%, by weight, phosphorus oxy acid.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the electrolytic solution comprises: about 0.05 to 10%, by weight, sulphuric acid, about 0.05 to 10%, by weight, boric acid, and about 0.05 to 10%, by weight, phosphorus oxy acid, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. **In re Aller, 105 USPQ 233.**

1. Claims **46,50** and **51** are rejected under 35 U.S.C. 103(a) as being unpatentable over Shah et al. (US 6,219,222) in view of Uehara et al. (US 6,042,740).

Regarding claims **46,50** and **51**, Shah et al. disclose all the claimed limitations with respect to claim 42 above, except for the organic solvent selected from a group consisting of: 1,3-propane diol, glycerol, 2-methyl-1, 3-propane diol, propylene glycol, and polyethylene glycol monomethyl ether; N-alkyl-2-pyrrolidone and diethylene glycol.

Uehara et al. teach a solvent including a glycerol, propylene glycol, triethylene glycol monomethyl ether (column 4, lines 1 – 42).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the organic solvent of Uehara substitute into Shah in order to

provide an electrolyte for a solid electrolytic capacitor having excellent electric properties (abstract).

2. Claims 47 – 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shah et al. (US 6,219,222) in view of Ferritto et al. (US 6,653,378).

Regarding claims 47, Shah et al. disclose all the claimed limitations with respect to claims 42 and 46 above, except for the organic solvent is glycerol.

Ferritto et al. show a solvent including a glycerol (column 8, lines 27 – 31).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the organic solvent of Ferritto substitute into Shah in order to provide high conductivity and high voltage breakdown.

Regarding claim 48, the teaching of Ferritto further includes the solvent being 1,3-propane diol (column 8, lines 27 – 30).

Regarding claim 49, the teaching of Ferritto further includes the solvent being 2-methyl -1,3-propane diol (column 8, lines 27 – 30).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Long K. Tran whose telephone number is 571-272-1797. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Long Tran



November 9, 2004



David Nelms
Supervisory Patent Examiner
Technology Center 2800